

Small, Light-Weight Pump Technologies for Mars Ascent Vehicles, Phase I

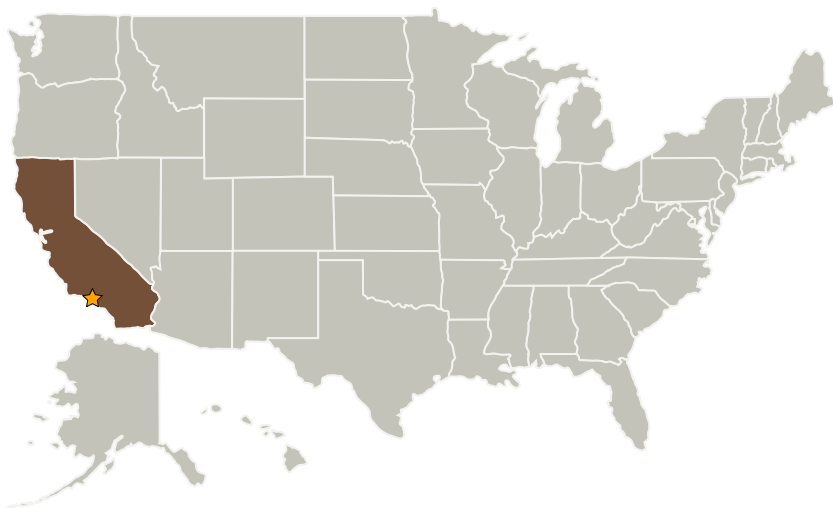
Completed Technology Project (2009 - 2009)



Project Introduction

To-date, the realization of high-performance liquid bipropellant rocket engines in the micro-scale has largely been hindered by the inability to obtain "on-board" pressurization through a light-weight and low-complexity pump. Ventions seeks to fulfill this critical need by proposing the development of a low-risk and low-cost pump that can be either be integral to the thrust chamber, or inserted in a modular manner with existing system components to provide significant performance improvements for Mars Ascent Vehicles.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Jet Propulsion Laboratory (JPL)	Lead Organization	NASA Center	Pasadena, California
Ventions, LLC	Supporting Organization	Industry	San Francisco, California

Primary U.S. Work Locations

California



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Table of Contents

Project Introduction	1
Primary U.S. Work Locations and Key Partners	1
Organizational Responsibility	1
Project Management	2
Technology Areas	2

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Jet Propulsion Laboratory (JPL)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX01 Propulsion Systems
 - └ TX01.1 Chemical Space Propulsion
 - └ TX01.1.3 Cryogenic